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AMSAT NEWS SERVICE
ANS-197

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:
ans-editor@amsat.org

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ANS-197 AMSAT News Service Weekly Bulletins

AMSAT News Service Bulletin 197.01
>From AMSAT HQ SILVER SPRING, MD.
July 15, 2012
To All RADIO AMATEURS
BID: $ANS-197.01

2012 AMSAT Space Symposium & Annual General Meeting Comes to Orlando

AMSAT announces the 2012 AMSAT Space Symposium will be held on Friday, October 26th through Sunday, October 28th. The Symposium weekend will feature:

+ Space Symposium with Amateur Satellite Presentations

+ Operating Techniques, News, & Plans from the Amateur Satellite World

+ Board of Directors Meeting open to AMSAT members

+ Meet Board Members and Officers

+ Annual General Membership Meeting

+ Annual Banquet-Keynote Speaker and Door Prizes

CALL FOR PAPERS

This is the second call for papers for the 2012 AMSAT Annual Meeting and Space Symposium to be held in Orlando, Florida on the weekend of October 26-28, 2012 at the Holiday Inn, Orlando Airport Hotel.

Proposals for papers, symposium presentations and poster presentations are invited on any topic of interest to the amateur satellite community:

+ Papers for publication in the Proceedings

+ Symposium Presentations

+ Poster Presentations

+ Equipment and Operating Demonstrations

We request a tentative title of your presentation as soon as possible, with final copy to be submitted by October 1 for inclusion in the printed proceedings.

Abstracts and papers should be sent to Dan Schultz, N8FGV, at n8fgv at amsat.org.

SYMPOSIUM SCHEDULE

To help you plan your trip to Orlando the 2012 Symposium Committee has posted a high-level schedule of the weekend's events.

Preliminary 2012 Symposium Schedule

Thursday 25 October 2012

AMSAT Board of Directors Meeting 8am - 9pm

Friday 26 October 2012

AMSAT Board of Directors Meeting 8am - Noon
Trips to SkyCraft 9am - Noon
AMSAT Symposium 1pm - 5pm

Saturday 27 October 2012

Symposium 8am - 3pm
AMSAT General Meeting 3:30pm
AMSAT Banquet 6:30pm - 10pm

Sunday 28 October 2012

7:30am AMSAT Area Coordinator's Breakfast
Local trip of Interest TBD

Monday 29 October 2012

Special trip to Kennedy Space Center 8am-6pm
The trip will include a round trip bus from the hotel and entrance to the Space Center. The cost will be about $100. This is a wonderful experience for those that haven't been and for those that have been multiple times. We need to get an idea of how many will participate to select the correct bus. Contact Martha if interested

Watch the AMSAT Symposium Web Pages for the latest information:
http://www.amsat.org/amsat-new/symposium/2012/index.php

[ANS thanks the 2012 Symposium Committee and 2012 Syposium Proceed-

ings Editor Dan Schultz, N8FGV for the above information]

AMSAT-UK Monitoring UK Space Agency Reform of the Outer Space Act

A posting on the UK Space Agency Web Site, announced, "Reform of the Outer Space Act 1986: Consultation". Graham Shirville, G3VZV commented, "Whilst they only relate to UK legislation, both the Consultation Document and the Impact Assessment Document cover a lot of interesting ground, technical, legal and statistical. Well worth a review in my opinion. These proposals make the Space Act more 'cubesat friendly'"

Both of these documents can be accessed on the UK Space Agency web: http://tinyurl.com/UK-Space-Act (www.bis.gov.uk)

The AMSAT-UK web summarizes the scope of the new Consultation:

This is in response to the Government Growth Review published in March 2011, in which the Government set out its wish to reform the Outer Space Act 1986 by introducing an upper limit on liability for UK operators.

The Outer Space Act covers all UK satellites irrespective of size, from tiny low cost educational CubeSats up to large commercial £500 million satellites.

The key aspects of the consultation are the proposals to waive the capped liability and insurance requirement for in-orbit operation of any satellite that meets the criteria of a CubeSat and to remove the requirement for unlimited indemnity from satellite operators.

The existing Outer Space Act imposes heavy additional costs (>£50,000 per annum) on those wishing to launch small educational CubeSats. The additional costs act as a major deterrent and to-date no such UK Cube-Sat has been launched.

Graham concludes, "Rest assured that AMSAT-UK will be responding!" More news will be posted as available. The UK Space Agency says that responses are due by August 31, 2012.

[ANS thanks Graham Shirville, G3VZV and AMSAT-UK for the above information]

Successful ARISS School Contacts Reported

Nunavik Youth Connect With ISS

On July 4, youth attending the Cirqiniq Summer Camp in Kuujjuaq, Quebec (Nunavik), Canada spoke with on-orbit astronaut Joe Acaba, KE5DAR via an ARISS contact. Telebridge station K6DUE in Greenbelt, Maryland provided the radio connection.

The contact was held in conjunction with a circus camp being offered to youth, ages 13 to 17, in Nunavik that was led by a group of instructors affiliated with Cirque du Soleil£. The campers learned tight-wire walking, aerial acrobatics and juggling among other

skills and ended the session with a parade and community show. This year's theme was "Planets and the Universe." Local media covered the event.

STEM High School Aerospace Scholars, Houston, TX Connect With ISS

An ARISS school contact with participants at Women in STEM High School Aerospace Scholars, Houston, TX was successfully completed on July 10. The contact was a telebridge between NA1SS and W6SRJ.

The group of high school juniors were participating in a summer program called WISH, an acronym for Women in STEM High School Aerospace Scholars. The students were selected from responses to a national invitation to attend multiple robust lessons for six days at Johnson Space Center in Houston. The young women attended briefings, and engaged in competitive hands-on engineering activities related to space exploration and research.

The ARISS contact was incorporated into the learning activities early in the week while learning about space communication and wireless technology.

A video of the contact has been posted on-line:
http://www.youtube.com/watch?v=M-2qegJWo&feature=player_embedded

The NASA Press release about the Women in STEM High School Aerospace Scholars program can be viewed on-line at:
http://www.nasa.gov/home/hqnews/2012/jun/HQ_12-209_WISH.html

[ANS thanks the ARISS Status Report and NASA for the above information]

Cuba to Alaska Contact Successful via FO-29

Hector Martinez, CO6CBF in Cuba reported a successful satellite contact Dale Pelzer, KL7R in Alaska via the FO-29 satellite. Cuban amateurs cannot operate on AO-7 mode B so FO-29 is their only opportunity for long range contacts.

Hector says the first 10 attempts via SSB were unsuccessful. Dale drove around 4 miles from his home to a nearby hill, many times very late at night. On Sunday, July 8 at 1920 UTC the two stations finally connected via CW.

Dale's equipment includes a Yaesu FT-817 (only 5W semi-duplex) and ARROW antenna with preamplifier. Hector's equipment is mostly a homebrew setup, 10 elements yagi on 2m and 18 elements yagi for 70cm with a homebrew preamplifier.

Hector will continue to look for new grids and long-range contacts via satellite. He invites interested stations to contact him via e-mail: co6cbf@frcuba.co.cu

[ANS thanks and congratulates Hector Martinez CO6CBF and Dale Pelzer KL7R for the above information]

Official Opening of the RSGB National Radio Centre

Wednesday, July 11, saw the official opening of the RSGB's National Radio Centre (NRC) at Bletchley Park in Milton Keynes.

The opening and unveiling of the plaque was undertaken by Mr. Ed Vaizey, MP. Mr Vaizey is the Minister for Culture, Communications and the Creative Industries and, as such, has overall responsibility for OFCOM. He stated that he fully supported the aim of the Centre in being able to enthuse and inspire children to become the engineers of the future.

Attendees included many of the sponsors together with Iain Standen, the Chief Executive of the Bletchley Park Trust plus, from overseas, Dave Sumner K1ZZ, CEO of the ARRL and Ole Garpestad, LA2RR IARU Vice-President.

AMSAT-UK have supported the creation of this valuable educational outreach resource at Bletchley Park and have arranged for the provision and installation of a set of fully steerable VHF and UHF satellite antenna arrays. It is hoped that it may be possible to use the NRC as the FUNcube-1 Mission Control Centre during the Launch and Early Operations Phase (LEOP) of the mission later this year.

National Radio Centre http://www.nationalradiocentre.com/

Pictures of opening http://www.uk.amsat.org/8841

[ANS thanks Trevor, M5AKA; RSGB, and AMSAT-UK for the above information]

NASA TV to Cover Three Hams Docking at ISS

NASA Flight Engineer Sunita Williams, KD5PLB, along with Russian cosmonaut Yuri Malenchenko, RK3DUP, and Japan Aerospace Exploration Agency astronaut Akihiko Hoshide, KE5DNI were launched aboard a Soyuz TMA-05M spacecraft from the Baikonur Cosmodrome in Kazakhstan at 0240 UTC, July 15.

The three ham crew will arrive at the ISS on July 16, joining NASA Flight Engineer Joe Acaba, KE5DAR, and two Russian cosmonauts: Expedition 32 Commander Gennady Padalka, RN3DT, and Flight Engineer Sergei Revin, RN3BS.

NASA TV's scheduled coverage of the docking is as follows:

Monday, July 16

11:15 PM CDT (0415 UTC, July 17) -- Expedition 32/33 Soyuz TMA-05M docking coverage begins (docking at 11:38 PM [0438 UTC, July 17]), followed by post-docking news conference from Mission Control in Korolev, Russia.

Tuesday, July 17

2:00 AM CDT (0700 UTC) -- Expedition 32/33 Soyuz TMA-05M hatch opening and welcoming ceremony coverage begins (ceremony scheduled for 2:25 AM [0725 UTC]).

NASA TV can be viewed on-line at: http://www.nasa.gov/ntv

[ANS thanks NASA for the above information]

Five CubeSats Ready for July 21 JAXA HTV-3 Launch

Five cubesats are scheduled to be launched on July 21 aboard the JAXA HTV-3 supply mission to the ISS. The satellites have been integrated with the J-SSOD small satellite deployer. The J-SSOD deployer will be integrated to the Japanese Experiment Module, also known as Kibo. They will be deployed with the Kibo robotic arm planned for the September, 2012 timeframe.

The five CubeSats on this mission include:

+ Raiko
  http://www.astro.mech.tohoku.ac.jp/RAIKO/ (Japanese)
  2U cubesat, photography, Ku-band beacon

+ We Wish
  http://www.meisei.co.jp/news/2011/0617_622.html
  Infrared camera for environmental studies

+ FITSat 1
  http://www.fit.ac.jp/~tanaka/fitsat.shtml
  High-speed data test, high power LED visual tracking
  CW Beacon 437.250 MHz,
  FM Data   437.445 MHz,
  High speed data 5840.00 MHz.

+ F-1 Vietnam Student CubeSat
  On-board camera for earth observation mission
  VX-3R1, 437.485 MHz FM downlink:
  o Solar cell power only, operates in sunlight only
  o Output power: max 0.3W, half-wave dipole antenna
  o Morse code beacon (10 chars) using PWM CW every 30 seconds

  VX-3R2, 145.980 MHz FM downlink:
  o Rechargeable battery, operates in dark and sunlight
  o Output power: max 1.0W, half-wave dipole antenna
  o AFSK 1200bps, half duplex, one AX.25 packet every 30 seconds

+ TechEdSat
  http://ncasst.org/techedsat.html
  http://www.uk.amsat.org/5018
  Downlink on 437.465 MHz

[ANS thanks the CubeSat teams, AMSAT-UK, and Mineo Wakita JE9PEL for the above information]

HORYU-2 Telemetry Resumes Operation

On Tuesday, July 3, the amateur radio satellite HORYU-2 (call sign JG6YBW) recovered from a problem with stuck telemetry on its 437.375 MHz telemetry downlink. The HORYU-2 Blog indicates the team are now attempting to take pictures using the on-board camera. Read the KIT

HORYU Blog in Google English: http://tinyurl.com/HORYU-Blog

The free KIT HORYU-2 telemetry software can be downloaded from
http://kitsat.ele.kyutech.ac.jp/Documents/information_launch_english.html

A HORYU-2 online WebSDR receiver can be found at:
http://sdr.opt.ro:8901/

HORYU-2 CW Telemetry Decoder by DK3WN:
http://tinyurl.com/SatSoftwareDK3WN/

HORYU-2, built by students from the Kyushu Institute of Technology,
was launched by JAXA from Tanegashima Space Center on May 18 with
the Observation Mission "SHIZUKU" (GCOM-W1). The SHIZUKU observation

images acquired by AMSR2 have been released. See:
http://www.jaxa.jp/press/2012/07/20120704_shizuku_e.html

[ANS thanks the HORYU-2 Team for the above information]

50th Anniversary of Telstar-1

Recently amateur radio satellite operators have commemorated the
50th anniversary of the launch of the first two amateur radio sat-
ellites: OSCAR-1 on December 12, 1961 and OSCAR-2 on June 2, 1962.
Amateur radio was in space just four years after Sputnik-1, the
first satellite was put in orbit.

This past week, fifty years ago, on July 10, 1962 the first commer-
cial communications satellite, Telstar-1, was launched. Two days
into its mission, it relayed the world's first transatlantic tele-
vision signal, from Andover Earth Station, Maine, to the Pleumeur-
Bodou Telecom Center, Brittany, France.

The satellite was spin-stabilized to maintain its desired orienta-
tion in space. Power to its onboard equipment was provided by a
solar array, in conjunction with a battery back-up system. During
the course of its operational lifespan, Telstar 1 facilitated over
400 telephone, telegraph, facsimile and television transmissions. It
operated until November 1962, when its on-board electronics failed
due to the effects of radiation.

SpaceMart.com has published an article of Telstar's 50th anniversary:
http://tinyurl.com/Telstar-50th (www.spacemart.com)

[ANS thanks AMSAT, Project OSCAR, and SpaceMart.com for the above
 information]

Satellite Shorts From All Over

+ Look in the August 2012 issue of QST magazine for a satellite arti-
  cle, "Backpacking With Satellites", on page 65 by David Palmer,
  KB5WIA. Dave covers lots of portable satellite operating advice,
  portable equipment selection, trek planning, and includes several
  interesting photos.

+ Listen for Patrick, WD9EWK/VA7EWK on VO-52 at 0200 UTC July 17 during his on-air satellite demonstration at the Tri-City Amateur Radio Association meeting in Goodyear, Arizona. Additional demonstration opportunities that evening may occur on SO-50 at 0300 UTC and one more VO-52 pass at 0335 UTC. All demonstration plans are dependent on the weather. Patrick will try to update the AMSAT-BB with the demonstration plans on Monday afternoon, as well as his Twitter feed @WD9EWK (use http://twitter.com/wd9ewk if you aren't on Twitter directly to view this feed).

+ Listen for David, XE3DX operating on SO-50 and AO-27 between July 16 - 20 from EK48, EK49, EK69, EL50, EL51, EL61 and EL60 in Campeche, Yucatan and Quintana Roo States in Mexico. He can be reached via e-mail at xe3dx@amsat.org

+ Listen for Norm, N3YKF operating from Peru. His trip begins on July 22. He says he has received the customs documents to bring amateur radio equipment. He plans to drive the Panamerica Sur from Lima to Nazca, Peru, activating grid squares along the way.

+ Watch a video on the Vimeo site "Grand Finale 2010-11", by McLean Fahnestock showing all 135 launches of the space shuttle program at once: http://vimeo.com/27505192

+ To help you sound like the smartest ham on the band here are three videos that explain CERN's discovery of a Higgs-like particle:

  o Minute Physics: http://www.youtube.com/watch?v=h5mTxRQcg
  o BBC http://www.youtube.com/watch?v=QpeqE_wLg
  o Physicist Michio Kaku on CNN:
      http://www.youtube.com/watch?v=VT-MlRq6o
  o What's a Higgs Boson, Anyway? on UniverseToday.com:
      http://www.universetoday.com/96122/whats-a-higgs-boson-anyway/

+ The free publication SatMagazine includes an article covering advances in CubeSat technology. "Advances In CubeSats Enable New Apps" by Erik Mumm starts on page 56. Download the July/August 2012 SatMagazine at http://www.satmagazine.com/2012/SM_JulAug2012.pdf

+ In the quiet, peaceful setting of a storage bay in the northwest corner of NASA's cavernous Vehicle Assembly Building at the Kennedy Space Center Spaceflight Now photographer Walter Scriptunas II used the tranquil opportunity to shoot this gallery that captures the space shuttle Atlantis in exquisite detail: http://spaceflightnow.com/shuttle/sts135/120703gallery/

+ When you play NASA's "Rocket Science 101!", you will select your favorite NASA mission and build a rocket to send the spacecraft into orbit. Rocket Science 101 is available online at: http://go.nasa.gov/Mn28Nt

+ Enjoy a 5 minute video commemorating the 50th anniversary of NASA's John F. Kennedy Space Center: http://www.youtube.com/watch?feature=player_embedded&v=GEU5irS8o

+ Jason Brand VK2FJAB, age 10, was interviewed for the morning "Today" show on Channel 9 in Australia. He talks about amateur radio and his Do-It-Yourself space projects. Watch it at: http://www.uk.amsat.org/8821

+ One of the interior decorating features often selected for the well-equipped-shack includes a copy of the Electromagnetic Radiation Spectrum Poster. Unihedron, a manufacturer of portable tools for physics and astronomy, offers you a link to download a personal

PDF copy of the poster or purchase a full-size printed copy at:
http://unihedron.com/projects/spectrum/moreinfo.php

+ This image from the French Pleiades satellite shows the island of Mont Saint Michel and its surrounding bay in northwest France. The photo was captured on May 3 at an altitude of about 700 km. See:
http://www.spaceref.com/news/viewsr.html?pidA338

+ Sometime this summer, Austrian skydiver Felix Baumgartner will leap from the edge of space, attempting to not only break the sound barrier with his body, but also break the record for the longest freefall from nearly 37km altitude. View a video simulation at:
http://www.youtube.com/watch?feature=player_embedded&v=qnQq86fkY

+ The next Hudson Valley Satcom net date will be on Thursday July 19 at 8PM EDT (UTC-4 UTC) on the 146.97 MHz MBARC Repeater (PL 100). This net is also available on echolink on the N2EYH-L node if you would like to join via this route. (Stu, WA2BSS)

[ANS thanks everyone for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

Primary and secondary school students are eligible for membership at one-half the standard yearly rate. Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status. Contact Martha at the AMSAT Office for additional student membership information. And with that, please keep in mind the discussion during Field Day setup when one ham was admiring the new tent being erected at an operating position. The owner remarked on the great deal he got on the purchase of the tent getting it at half price. The ham said, "Yes, it is a great deal!" The owner noted it was the year of his discount tent. (Apologies to Richard The Third and Willy Shakespeare.)

73,
This week's ANS Editor,
JoAnne Maenpaa, K9JKM
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